IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application Ser. No.: 10/510,310 Group Art Unit: 2875

Filing Date: 10/06/2004 Examiner: W. J. CARTER

Attorney Docket Number NL020329 Confirmation No.: 7470

Inventor Name(s): PETERS

Title: LIGHTING UNIT

Mail Stop Appeal Brief
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

APPEAL BRIEF

Sir:

This is an appeal from the final rejection of Claims 1-3, 5-8, 13-19.

I. REAL PARTY IN INTEREST

The real party in interest is Koninklijke Philips Electronics, N.V., a corporation of the Netherlands.

II. RELATED APPEALS AND INTERFERENCES

This application stands rejected for double patenting over co-pending application serial no. 10/535,293. That application is also on appeal.

III. STATUS OF CLAIMS

Claims 1 and 3-5 stand rejected under 35 U. S. C. 102(b) as anticipated by EP 0336478 ("Maassen").

Claims 7, 8, 13-17, and 19 stand rejected under 35 U.S.C. 103(a) over Maassen

Claims 6 stands rejected under 35 U.S.C. 103(a) over Maassen in view of U.S. Pat. No. 6,382,816 ("Zhao").

Claim 18 stands rejected under 35 U.S.C. 103(a) over Maassen in view of U.S. Pat. No. 5,140,220 ("Hasegawa").

Claims 4 and 9-12 stand allowed.

IV. STATUS OF AMENDMENTS

The amendment under 116 is indicated as entered in the online filewrapper of the case, though not in the advisory. Examiner Carter confirmed in a telephone conversation dated 4/12/07 that he has now allowed claims 9-12, though that also was not indicated in the advisory action.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1

Claim 1 recites a lighting unit. The lighting unit includes a concave reflector (2) having an axis of symmetry (3), see p. 3, ll. 29-30 of the specification. The lighting unit further includes a light emission window (21) bounded by an edge (20) of the reflector which surrounds the axis transversely thereto, per p. 3, ll. 30-31. The lighting unit also includes an elongate light source

(30) which is axially arranged substantially on the axis of symmetry and which is accommodated in a holder (4) opposite the light emission window, per. p. 3, ll. 31-33. The lighting unit still further includes an axially positioned cap (5) serving as an optical screening means that partly surrounds the light source for intercepting unreflected light rays, per p. 3, line 33 through p.4, line 2. The lighting unit is characterized in that the cap forms part of a sleeve surrounding the light source, per p. 4, line 2.

Claim 3

Claim 3 recites that the edge (63) is formed as a transition between the cap (61) and a sleeve portion (64) located between the cap and the holder. This is shown at Fig. 2B and discussed at p. 4, lines 20-22. It can be seen from the figure and from the text, that the edge 63 acts as a transition in the sense that there is a discontinuity between the cap 61 and the sleeve 64. This contrasts with fig. 2A, where the edge 62 protrudes from the cap portion. Fig. 3 shows another example of the edge (not numbered) acting as a transition between the cap 61 and the sleeve 65.

Claim 6

This claim recites that the lamp is a metal halide lamp with a ceramic discharge vessel, *see e.g.* p. 3, line 5 of the specification.

Claim 7

This claim recites a lighting unit comprising a concave reflector (2) defining an axis (3) of symmetry and having an edge (20) surrounding the axis. The edge is adapted to accommodate a light emission window (21) at a position traverse to the axis. The unit includes an elongate light source (30) arranged substantially along the axis. The unit also includes an integral sleeve and cap unit (5) formed into from a single piece of material and surrounding the light source. A cap portion (61) of the sleeve and cap unit being at an end facing the position. The cap portion is adapted to act as an optical screening means that partly surrounds the light source and intercepts unreflected light rays. Please see the specification at the bottom of p. 3 and the top of p. 4.

Claim 15 is a method claim, but is otherwise analogous to claim 7 for purposes of the argument advanced herein.

Claim 8 and 17

Claim 8 depends from claim 7 and recites that the single piece of material also forms a screening ring (62, 63) around the axis, the screening ring enhancing the screening properties of the sleeve and cap unit. This embodiment is shown in all of figures Fig. 2a, Fig. 2b, and Fig. 3; and is discussed on p. 4, lines 16 et seq. of the specification.

Claim 17 is a method claim, but it is otherwise analogous to claim8 for purposes of the argument with respect to the references.

Claim 13

Claim 13 depends from claim 7 and recites that the single piece of material comprises a

coating at the cap end for achieving the screening and intercepting properties of the cap. Please see p. 4, lines 10 et seq. of the specification.

In the argument, claim 13 is grouped with claim 14 and 16. It cannot be said that these claims stand or fall together, since they depend from different independent claims that are separately rejected; however, they do have analogous limitations so it is convenient to argue them together.

Claim 18

This claim recites that the screening ring is at a non-perpendicular angle with respect to the axis. This is shown in Figure 3.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

All grounds of rejection are to be reviewed, though some dependent claims are not argued separately.

VII. THE ARGUMENT

Claim 1

Claim 1 recites that "the cap forms part of the sleeve."

The Examiner purports to find this in Maassen. Applicant respectfully submits that the Examiner mischaracterizes the reference. In the reference, a cap is stuck on the end of a sleeve, but the cap does not form part of the sleeve.

The Examiner state that in Maassen that items "together form a sleeve," but that is not

the way the reference uses the word "sleeve." Maassen recognizes a clear boundary between the sleeve and the cap.

Moreover, the present application cites Maassen as prior art and explicitly distinguishes the structure there using the "forms part of the sleeve" language. Therefore the terminology, as defined in the specification plainly intends to exclude the structure of Maassen. Per the case of Phillips v. AWH Corp. 415 F.3d 1303; 2005 U.S. App. LEXIS 13954; 75 U.S.P.Q.2D (BNA) 1321, (Fed. Cir. July 12, 2005, decided, as amended July 14, 2005 the specification and drawing are supposed to be the primary source of interpretation of claim terminology. Applicants are entitled to be their own lexicographers. Therefore, the language does not directly read on the reference.

The Examiner cites the case of In re Larson. In this case, language including the word "integral" was interpreted a given way using a dictionary. Then the board concluded that to make something integral was obvious. However, merely because one board considered this change obvious in one technical context does not necessarily mean that making the sleeve/cap combination integral here was necessarily obvious. First, the fact that the cap sleeve combination was tending to break apart in practice had to be recognized as a problem. Absent this recognition, there was no reason to look for any kind of solution. The reference fails to recognize the problem that Applicant recognized.

Applicant accordingly respectfully submits that the Examiner has failed to make a *prima facie* case against claim 1.

Claim 3

Applicant does not understand why the Examiner thinks the recitation of claim 3 could be taught or suggested by Maassen. In Maassen, the edge of the cap 10 does not have its own reference numeral. However, looking at Fig. 1, Applicant sees an edge protruding from both the cap 10 and the envelope 24. Applicant does not see that the edge can be viewed as forming a transition between the cap and the sleeve, as claimed by Applicant, and as that term is used in Applicant's specification and drawing. Instead, the edge of Maassen is an interruption between the cap and the sleeve. Applicant accordingly respectfully submits that the Examiner misconstrues the reference.

Maassen: Claim 7, 8, 13-17, and 19

Applicant respectfully submits that this rejection fails to satisfy 37 CFR 1.104, because the Examiner groups claims together that have different recitations and fails to indicate which recitation is being rejected with which argument.

Claim 7 and 15

Claim 7 recites an integral sleeve and cap unit formed from a single piece of material. The Examiner states that it would be obvious to do this based on Maassen.

The Larson case, cited by the Examiner, held that, given a particular set of facts, making two parts integral was obvious. It does not follow that it is always obvious to make two parts integral.

Often, the heart of invention is to recognize that there is problem in the first place. Once

the problem is recognized, the solution is much easier. In this case, the inventor recognized that sleeve/cap assemblies such as shown in Maassen were creating a problem. They were failing in practice. As explained in the second paragraph of the application, temperature stresses in Maassen were causing the location of the cap to be uncertain. The invention addresses this problem by making the sleeve and cap from a single piece of material.

The Examiner has not shown where Maassen recognizes this problem. Without a recognition of the problem, there can be no teaching or suggestion that the problem needs to be solved. The recognition of the problem lies in Applicant's disclosure, not in the reference. Accordingly, Applicant respectfully submits that the Examiner's conclusion of obviousness results from impermissible hindsight.

Claim 15 is analogous to claim 7 with respect to the argument discussed above, though there are other differences.

Claims 8 and 17

This claim recites that, in addition to the cap and sleeve, also a screening ring is formed from the single piece of material. Since the prior art failed to teach or suggest the first two being formed from a single piece of material, *a fortiori* it fails to teach or suggest that the screening ring would be. Applicant accordingly respectfully submits that the Examiner has failed to make a *prima facie* case against this claim.

Claim 17 is analogous to claim 8 for purposes of this argument.

Claims 13, 14, and 16

The Examiner discusses the obviousness of the coating. Applicant infers that the Examiner is speaking about claim 13, though the Examiner does not say so. In these comments about the coating, the Examiner points to paint on the first portion 8 of the collar 7 of Maassen and says that since there is a coating in one place it would be obvious to put it on the cap. Applicant respectfully disagrees with this conclusion.

In fact, it would make no sense to add the paint from portion 8 to the cap 10 in Maassen, since the cap 10 in Maassen already has whatever optical properties are necessary. In the claimed invention, the coating on the inside of the material that makes the claimed sleeve/cap unit only makes sense because the portion of the material that is supposed to serve as the cap needs to be altered to have desired optical properties. Applicant accordingly respectfully submits that the rejection of claim 13 is an improper hindsight reconstruction.

Claims 14 and 16 are analogous to claim 13 with respect to this limitation.

Claim 6—Maassen/Zhao

In rejecting this claim, the Examiner cites Zhao. After reviewing Zhao, Applicant concludes that it is a wholly different type of lamp from that discussed in Maassen, in particular not dealing with intercepting light rays from the light source. Zhao does contain the words "ceramic metal halide lamps," but these are mentioned only in passing. It appears that they could only have been uncovered using a keyword search on Applicant's claims. One of ordinary skill in the art would not have made this combination, because one of ordinary skill in the art would not have had Applicant's claims to make a keyword search on. Applicants accordingly respectfully

submit that this combination is an improper hindsight reconstruction in light of Applicant's disclosure and claims.

Claim 18: Maassen/Hasegawa

Claim 18 stands rejected over the combination of Maassen and Hasegawa. Maassen is from the art of reflector lamps, while Hasegawa comes from the art of stand alone light emitting diodes. Applicant accordingly respectfully submits that it would not be obvious to one of ordinary skill in the art to combine them.

Moreover, claim 18 recites an angle of a screening ring. Claim 18 depends from claim 7. Claim 7 says that the ring is for intercepting unreflected light rays. Element 3 of Hasegawa, cited by the Examiner, is stated to be a diffuser. A diffuser does not intercept light rays. Instead, it diffuses them. Applicant accordingly respectfully submits that the Examiner mischaracterizes the reference.

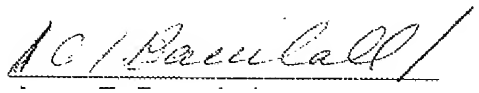
Double patenting

The co-pending application uses a locking mechanism to attach a cap to a sleeve. The present application has the cap forming part of the sleeve. These may be two solutions to similar problems; but they are not the same solution, and one is not obvious from the other. They each require totally separate manufacturing techniques, with entirely different considerations inherent in those techniques. Applicant accordingly respectfully submits that the Examiner has failed to make a *prima facie* case of double patenting.

VIII. CONCLUSION

Applicant respectfully submits that he has answered each issue raised by the Examiner and that the application is accordingly in condition for allowance. Such allowance is therefore respectfully requested.

Respectfully submitted,



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CLAIMS APPENDIX

1. A lighting unit comprising

- a concave reflector having an axis of symmetry
- a light emission window bounded by an edge of the reflector which surrounds the axis transversely thereto,
- an elongate light source which is axially arranged substantially on the axis of symmetry and which is accommodated in a holder opposite the light emission window, and
- an axially positioned cap serving as an optical screening means that partly surrounds the light source for intercepting unreflected light rays,

characterized in that the cap forms part of a sleeve surrounding the light source.

2. A lighting unit as claimed in claim 1, characterized in that the cap is provided with an edge which is impermeable to light and which extends transversely to the axis of symmetry.

3. A lighting unit as claimed in claim 2, characterized in that the edge is formed as a transition between the cap and a sleeve portion located between the cap and the holder.

4. A lighting unit comprising

- a concave reflector having an axis of symmetry
- a light emission window bounded by an edge of the reflector which surrounds the axis transversely thereto,

- an elongate light source which is axially arranged substantially on the axis of symmetry and which is accommodated in a holder opposite the light emission window, and
- an axially positioned cap serving as an optical screening means that partly surrounds the light source for intercepting unreflected light rays, the cap forming part of a sleeve surrounding the light source.

characterized in that the cap is surrounded at a distance d by a screening ring which is impermeable to light and which extends over a height h in the direction of the light emission window.

5. A lighting unit as claimed in claim 1, wherein the reflector and the light source are indetachably integrated into a lamp.

6. A lamp as claimed in claim 5, characterized in that the lamp is a metal halide lamp with a ceramic discharge vessel.

7. A lighting unit comprising

- a concave reflector defining an axis of symmetry and having an edge surrounding the axis, the edge being adapted to accommodate a light emission window at a position traverse to the axis;
- an elongate light source arranged substantially along the axis;

- an integral sleeve and cap unit formed into [sic][1] from a single piece of material and surrounding the light source, a cap portion of the sleeve and cap unit being at an end facing the position, the cap portion being adapted to act as an optical screening means that partly surrounds the light source and intercepts unreflected light rays.

8. The lighting unit of claim 7, wherein the single piece of material also forms a screening ring around the axis, the screening ring enhancing the screening properties of the sleeve and cap unit.

9. A lighting unit comprising

- a concave reflector defining an axis of symmetry and having an edge surrounding the axis, the edge being adapted to accommodate a light emission window at a position traverse to the axis;
- an elongate light source arranged substantially along the axis;

wherein

- an integral sleeve and cap unit formed into from a single piece of material and surrounding the light source, a cap portion of the sleeve and cap unit being at an end facing the position, the cap portion being adapted to act as an optical screening means that partly surrounds the light source and intercepts unreflected light rays;
- the single piece of material also forms a screening ring around the axis, the screening ring

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[1] The superfluous preposition "into" is a typo and should be deleted in an amendment under rule 312 upon allowance.

enhancing the screening properties of the sleeve and cap unit;

- the screening ring includes a boundary closer to the axis and an edge more distant from the axis, and
- a sleeve portion of the sleeve and cap unit extends from that edge of the screening ring which is more distant from the axis.

10. The lighting unit of claim 9, wherein the screening ring is at a perpendicular angle with respect to the axis.

11. The lighting unit of claim 9, wherein the screening ring is at a non-perpendicular angle with respect to the axis.

12. A lighting unit comprising

- o a concave reflector defining an axis of symmetry and having an edge surrounding the axis, the edge being adapted to accommodate a light emission window at a position traverse to the axis;
- o an elongate light source arranged substantially along the axis;
- o an integral sleeve and cap unit formed into from a single piece of material and surrounding the light source, a cap portion of the sleeve and cap unit being at an end facing the position, the cap portion being adapted to act as an optical screening means that partly surrounds the light source and intercepts unreflected light rays,

wherein the sleeve and cap unit comprises an integrally formed conical ring surface with

a maximum apex angle of 10), the apex angle being at the side of the position, a conical ring surface on the sleeve and cap unit defining a screening ring for forming a converging beam.

13. The lighting unit of claim 7, wherein the single piece of material comprises a coating at the cap end for achieving the screening and intercepting properties of the cap.

14. The lighting unit of claim 1, wherein the sleeve and cap are formed from a single piece of material with a coating at the cap end for achieving the screening and intercepting properties of the cap.

15. A method for manufacturing a lighting unit comprising

- integrally forming a sleeve and cap unit from a single piece of material, the cap portion of the sleeve and cap unit being for optically screening light rays and intercepting unreflected light rays;
- assembling the sleeve and cap unit together with a reflector and light source, the reflector defining an axis of symmetry and having an edge adapted to hold a light emission window at a position traverse to the axis, the assembling being such that the light source is substantially along the axis and the sleeve and cap unit is around the light source with the cap facing the position.

16. The method of claim 15, comprising coating the cap portion of the sleeve and cap unit to achieve the optical properties of the cap portion.

17. The method of claim 15, further comprising forming a screening ring portion of the sleeve and cap unit from the same single piece of material, the screening ring also having optical screening and reflecting properties.

18. The method of claim 17, wherein the screening ring is at a non-perpendicular angle with respect to the axis.

19. The method of claim 17, wherein the screening ring is at a perpendicular angle with respect to the axis.

EVIDENCE APPENDIX

Copies of evidence 41.37 (c)(1)(ix)

(none)

RELATED APPEALS APPENDIX

The co-pending application on appeal does not yet have a decision.